

only 3%, both cranial and extracranial tumour progression in 9%, and the cause of death was unknown in 53%.

Conclusion: In multivariable analysis (Table 1), performance status (KPS), the interval from diagnosis of the primary cancer to BM, WBRT prior to SRS and lack of extracranial metastasis were all identified as independent predictors of OS. SRS is a well tolerated and effective treatment for elderly patients.

Table 1. Multivariable Analyses of Survival (Wald test)

| Factor ¹ | Hazard Ratio (95% C.I.) | P |
|---|----------------------------|-------|
| KPS (50–60 vs. 70–80 vs. 90–100) | 1.47 (1.16–1.88) | 0.002 |
| Interval from diagnosis of primary tumour to diagnosis of BM (≤12 months vs. >12 months) | 1.69 (1.21–2.36) | 0.002 |
| Extracranial metastasis (No vs. Yes) | 1.66 (1.18–2.32) | 0.003 |
| WBRT prior to SRS (Yes vs. No) | 1.67 (1.18–2.32) | 0.004 |

¹Feature with the poorest prognosis is listed first.

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POSTER

Obesity in the Elderly: on the Role of Adipokines in Prostate Cancer Progression

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Background: Although an increasing number of studies confirms the relationship between obesity and several cancers, available data are largely insufficient in understanding the underlying molecular basis in most fields. Adipose tissue, which is the largest endocrine organ in the body, plays, through the release of adipokines, an important role in regulating not only energy metabolism but also cell growth and differentiation in several tissues. For this reason adipokines have been suggested to influence the progression of cancer cells. Increasing prevalence of visceral obesity in the elderly population may explain the increment in incidence of advanced prostate cancer in western Countries despite the improvement in diagnostic procedures.

Materials and Methods: Ninety consecutive patients diagnosed with prostate cancer (PCa), benign prostatic hyperplasia (BPH) or for other non prostatic and non tumoral urological diseases were enrolled at the urology clinic of our University. For each patient a detailed clinical history and serum values of metabolic variables were recorded. Blood samples and surgical prostatic tissue specimens, when applicable, were collected for the measurement of serum adipokines and tissue adipokine receptors. **Results:** The waist to hip ratio (WHR) appeared to be a significant risk variable for both PCa and BPH. Among the adipokines tested, including leptin, adiponectin, TNF and IL-6, only serum values of leptin were significantly associated to risk of PCa but not of BPH. Moreover leptin values were positively associated to WHR. Leptin receptors were localized in epithelial prostate cells mainly in tumour cells with invading phenotype. Adiponectin serum values, although were not associated to risk of PCa, demonstrated an inverse correlation with neuroendocrine variables. These data were confirmed in vitro by using PCa cell models. In fact high leptin production was positively correlated with increased proteolytic and invasive capacity in PCa cells.

Conclusions: Our data appear to confirm the association between leptin levels and progression of prostate cancer and suggest a molecular mechanism based on the modulation of cancer cell invasion.

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POSTER

Evaluation of Therapeutic Response to a New Radiosensitization Treatment (KORTUC II) for Aged And/or Surgery-refusing Patients With Stage I/II Breast Cancer by Dynamic MRI

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Background: We have developed a new radiosensitizer containing hydrogen peroxide and sodium hyaluronate for topical tumour injection, to convert various radioresistant tumours into radiosensitive tumours. The method has been named Kochi Oxydol-Radiation Therapy for Unresectable Carcinomas, Type II (KORTUC II). Using KORTUC II, we started to perform breast-conservation treatment (BCT) without any surgical procedure for aged and/or surgery-refusing patients with breast cancer in stages I or II. Given the desire of patients to avoid surgical procedures, we could not obtain histological confirmation of the primary tumour region following KORTUC II treatment. Instead of getting histological confirmation, we employed dynamic magnetic resonance imaging (MRI), which is

considered highly useful for precise evaluation of therapeutic responses to neo-adjuvant chemotherapy (NAC) and or induction chemotherapy for patients with breast cancer. The purpose of this study was thus to evaluate therapeutic response to KORTUC II treatment in patients with stage I/II breast cancer using annual dynamic magnetic resonance imaging. Moreover, in comparison with other diagnostic modalities such as positron emission tomography-computed tomography (PET-CT), power-Doppler ultrasonography, and mammography, the diagnostic accuracy of dynamic MRI was also evaluated.

Materials and Methods: The study was performed at Kochi Medical School Hospital from 2006 to 2011. Eleven aged and/or surgery-refusing patients with stage I/II breast cancer were enrolled in the study after obtaining fully informed consent. Prior to and following KORTUC II treatment, no patients received any chemotherapeutic agents due to high age and/or refusal. All patients underwent dynamic MRI prior to and annually following KORTUC II treatment. We compared these MRI findings, and also compared MRI findings with other diagnostic modalities performed at the same period. Following KORTUC II treatment, patients with estrogen receptor-positive tumour were started on endocrine therapy using an aromatase inhibitor.

Results: In all cases, disappearance of tumour lesions was shown on dynamic MRI performed at approximately 1 year following KORTUC II treatment and marked therapeutic effects of treatment were also confirmed through other diagnostic modalities performed during the same period. The mean follow-up period for patients at the end of February 2011 was 35.1 months.

Conclusions: Dynamic MRI of the breast clearly showed marked therapeutic effects of KORTUC II treatment for stage I/II breast cancer. These results confirm that BCT without any surgical procedure can be safely performed using our new radiosensitization treatment of KORTUC II for topical injection into the tumour tissue.

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POSTER

Liver Resection in the Elderly: Combined Anaesthetic Assessment and Enhanced Recovery Improves Outcome

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Background: Colorectal carcinoma is the second most common malignancy and the second most leading cause of cancer deaths in western countries. 76% of patients with a newly diagnosed colorectal carcinoma are between 65 and 85 years old. Around 25% of patients will develop hepatic metastasis, for which resection is the only potential curative treatment.

Previously published data from our unit has shown that liver resection for colorectal liver metastasis in the over 70's is feasible, though there is higher morbidity and mortality in this group. Between 1/1/2008 and 1/11/2009, our unit performed a staged introduction of enhanced recovery program, and formalised anaesthetic assessment including cardiopulmonary exercise testing (CPET), a non-invasive method of quantifying a patients fitness. This study aimed to assess the combined effect of these interventions on outcome in elderly patients undergoing resection of colorectal liver metastasis.

Methods: All patients over the age of 70 undergoing resection of colorectal liver metastasis from 1/1/2008 to 11/3/2011 were identified from a prospectively maintained research database (Group A). Data was extracted to compare with previously published data from our unit collected between 8/1990 and 4/2007 (Group B).

Results: Group A consisted of 79 patients, compared to 178 in group B. In group A, 31 patients (39.2%) received neoadjuvant chemotherapy compared to 34 patients (18.8%) in group B ($p < 0.001$). Median hospital stay was 7 days for group A and 13 days in group B ($P < 0.001$). 36 (45.6%) patients in group A had complications in comparison to 70 (38.5%) patients in group B ($p = 0.348$). Two in hospital deaths occurred in group A (2.5%) compared to 9 (4.9%) in group B ($p = 0.356$).

Conclusions: The introduction of cardiopulmonary exercise testing and anaesthetic assessment, within an enhanced recovery program, can lead to significant reductions in length of stay in elderly populations. There is a developing trend towards lower mortality. There is a trend towards increasing complications, which may be attributable to increased use of neoadjuvant chemotherapy.